



**University of
Zurich**^{UZH}

**Zurich Open Repository and
Archive**

University of Zurich
University Library
Strickhofstrasse 39
CH-8057 Zurich
www.zora.uzh.ch

Year: 1995

Differences in progression of HIV infection between men and women

Egger, Mattias ; Twisselmann, Wiebke ; Ledergerber, Bruno

DOI: <https://doi.org/10.1136/bmj.310.6984.941a>

Posted at the Zurich Open Repository and Archive, University of Zurich

ZORA URL: <https://doi.org/10.5167/uzh-124469>

Journal Article

Published Version

Originally published at:

Egger, Mattias; Twisselmann, Wiebke; Ledergerber, Bruno (1995). Differences in progression of HIV infection between men and women. *BMJ : British medical journal*, 310(6984):941.

DOI: <https://doi.org/10.1136/bmj.310.6984.941a>

| | All respondents | | | | | | |
|----------------------------|-----------------|------------------------------------|------|------------------------------------|--|--|------|
| | | | | | Paired comparison between 1989 and 1994 | | |
| | 1989 | | 1994 | | No of pairs | Median change (interquartile range)* | P† |
| | No | % (95% Confidence intervals) | No | % (95% Confidence intervals) | | | |
| Nebuliser in practice | 198 | 91.4 (87.5 to 95.3) | 189 | 98.4 (96.6 to 100.2) | 146 | 0 (0 to 1) | 0.03 |
| Takes meter on house calls | 198 | 31.8 (25.3 to 38.3) | 191 | 34.6 (27.8 to 41.4) | 148 | 0 (0 to 2) | 0.9 |

*Positive values indicate increase. †Signed rank statistic.

In Evans and colleagues' study 44% of the practitioners either carried a nebuliser or said that one was available in their surgery. The difference in proportions of practices with a nebuliser is 54% (95% confidence interval 45% to 62%) between their study and ours. Similarly, 54% of the practitioners in Evans and colleagues' study carried a peak flow meter and the difference in proportions is 19% (9% to 29%). The differences in the proportions are therefore significant, with more practices having nebulisers yet fewer practitioners usually taking meters on house calls in Northern Ireland. Although this may reflect the different methods and emphases of the two surveys, it suggests that important inter-regional differences in asthma care by general practitioners may exist. This has important implications for research into asthma care by general practitioners because we cannot assume that care in one geographical region is representative; any attempt to draw generalisable conclusions will require a national sample.

R K MCKINLEY
Senior lecturer

Department of General Practice,
University of Leicester,
Leicester General Hospital,
Leicester LE5 4PW

W K STEELE
Senior lecturer

Department of General Practice,
Queen's University of Belfast,
Dunluce Health Centre,
Belfast BT9 7HR

- 1 Evans SA, Stoner J, Hardy C. Are general practitioners equipped to manage acute severe asthma? *BMJ* 1994;309:1486. (3 December.)
- 2 McKinley RK, Jamison JP. The use of and attitude to peak flow measurement in general practice. *Ir Med J* 1994;87:84-5.

The study in 1989 was conducted while R K McKinley held a research fellowship from the Department of Health and Social Security (Northern Ireland) in the department of general practice at the Queen's University of Belfast, and the study in 1994 was financed by a grant from the National Asthma Campaign.

Chickenpox in the tropics

EDITOR,—In their editorial on immunisation against chickenpox Lainie Friedman Ross and John D Lantos fail to recognise that chickenpox is more severe in the tropics than in temperate climes.¹ The reason for this lies in the differences in the age specific incidence of chickenpox between the regions.

In Singapore the peak incidence of chickenpox occurs in adolescence and young adulthood² and is associated with low herd immunity to chickenpox in the young adult population.³ In recent times this trend has also been observed in populations living in temperate regions.^{4,5} Although chickenpox is benign in childhood, in adults it is associated with more severe disease. In pregnant women it is also associated with the risk of chickenpox in the unborn fetus and newborn infant. The social costs of the disease would also be expected to be higher than those estimated for populations in which chickenpox occurs mainly in childhood. It is

therefore erroneous to assume that chickenpox is benign in all populations.

Since vaccination against chickenpox is most efficacious in childhood, a universal immunisation programme should be targeted at young children. The epidemiology of chickenpox and its age specific incidence should be taken into consideration when the issue of mass chickenpox in a particular population is addressed. In this regard, universal immunisation of populations living in the tropics may be justified.

B W LEE
Associate professor

Department of Paediatrics,
National University of Singapore,
Singapore 0511

A Y S TAN
Senior registrar

Department of Paediatrics,
National University Hospital,
Singapore 0511

- 1 Ross LF, Lantos JD. Immunisation against chickenpox. *BMJ* 1995;310:2-3. (7 January.)
- 2 *Epidemiology News Bulletin*, Singapore 1989;17:27-8.
- 3 Ooi PL, Goh KT, Doraisingham S, Ling AE. Prevalence of varicella-zoster virus infection in Singapore. *Southeast Asian J Trop Med Public Health* 1992;23:22-5.
- 4 Miller E, Vurdien J, Farrington P. Shift in age in chicken pox. *Lancet* 1993;341:308-9.
- 5 Gray GC, Palinkas LA, Kelly PW. Increasing incidence of varicella hospitalisations in the United States army and personnel: are today's teenagers becoming more susceptible? Should recruits be vaccinated? *Pediatrics* 1990;86:867-73.

Differences in progression of HIV infection between men and women

EDITOR,—Alessandro Cozzi Lepri and colleagues report little difference in progression of HIV infection between men and women in the Italian seroconversion study.¹ We have examined this issue in the Swiss HIV cohort study, one of the largest continuing studies of a seroprevalent cohort (a cohort of people with HIV infection in whom the date of seroconversion is not known). The study has enrolled over 6000 participants from all transmission groups, including nearly 2000 women.² In the Swiss survey there was no evidence for differences between the sexes in either progression to different degrees of CD4 lymphocytopenia or progression to death when differences in CD4 cell counts at entry were taken into account in the analysis.³

The authors emphasise the importance of incident cohorts (cohorts in which the date of seroconversion is known) for analysis of differences in the progression of HIV infection. The similar results that we obtained from a seroprevalent cohort indicate, however, that time since infection may have no independent prognostic importance when CD4 cell counts are considered in the analysis. Indeed, this conclusion was reached in analyses of several incident cohorts, including the Italian seroconversion study.^{4,5} Therefore, while incident cohorts are indispensable for answering several important questions, seroprevalent cohorts may offer advantages in other situations. One advantage is the generally larger sample size, and therefore greater statistical

power; this is needed to detect or exclude smaller differences in the progression of disease. For example, the study by Cozzi Lepri and colleagues, based on 854 patients and 42 deaths, could not exclude the possibility of a 79% increase in mortality from AIDS among women compared with men. Conversely, an analysis of the Swiss HIV cohort study based on 2871 patients and 761 deaths showed that such substantial differences can be excluded with confidence.³

The only difference between the sexes found by Cozzi Lepri and colleagues related to AIDS defining cytomegalovirus infection. The authors conclude, on the basis of four cases among women and none among men ($P=0.01$), that this infection may be a more common AIDS defining event among women. We have examined this supposition in the Swiss study by analysing the incidence of disseminated cytomegalovirus infection in participants who were infected either by injecting drugs or heterosexually and who were free of AIDS at registration. Both univariate and multivariate analyses indicate that there is no significant difference between women and men in the occurrence of disseminated cytomegalovirus infection over a mean follow up of three years—if anything, there was a trend in the opposite direction (table). This analysis thus fails to confirm the results of Cozzi Lepri and colleagues. Because of the large number of AIDS-defining conditions tested, their finding may be a false positive result due to a type 1 error. Indeed, applying a Bonferroni-type correction renders their P value non-significant.

In conclusion, the examples presented here show how analyses of incident and seroprevalent cohorts can sensibly complement each other.

MATTHIAS EGGER
Senior lecturer in epidemiology

Department of Social and Preventive Medicine,
University of Berne,
Berne,
Switzerland

WIEBKE TWISSELMANN
Social scientist "Frau und HIV/Aids"
BRUNO LEDERGERBER
Senior research fellow

University of Zurich,
Zurich,
Switzerland

- 1 Cozzi Lepri A, Pezzotti P, Dorrucci M, Phillips AN, Rezza G, and the Italian Seroconversion Study. HIV disease progression in 854 women and men infected through injecting drug use and heterosexual sex and followed for up to nine years from seroconversion. *BMJ* 1994;309:1537-42. (10 December.)
- 2 Ledergerber B, von Overbeck J, Egger M, Luethy R. The Swiss HIV cohort study: rationale, organization and selected baseline characteristics. *Soz Präventivmed* 1994;39:387-94.
- 3 Von Overbeck J, Egger M, Davey Smith G, Schoep M, Ledergerber B, Furrer H, et al. Survival in HIV infection: do sex and category of transmission matter? *AIDS* 1994;8:1307-13.
- 4 Phillips AN, Pezzotti P, Cozzi Lepri A, Rezza G, and the Italian Seroconversion Study. CD4 lymphocyte count as a determinant of the time from HIV seroconversion to AIDS and death from AIDS: evidence from the Italian seroconversion study. *AIDS* 1994;8:1299-305.
- 5 Phillips AN, Sabin CA, Elford J, Boffill M, Janossy G, Lee CA. Acquired immunodeficiency syndrome (AIDS) risk in recent and long-standing human immunodeficiency virus type 1 (HIV-1)-infected patients with similar CD4 lymphocyte counts. *Am J Epidemiol* 1993;138:870-80.

Heart muscle disease related to HIV infection

EDITOR,—We agree with Peter F Currie and colleagues that the aetiology of heart muscle disease in HIV infection is unknown.¹ Given that most HIV infection occurs in the developing world, conditions such as rheumatic heart disease may contribute to cardiac complications in HIV infection even though a significant interaction has not yet been noted.² We report a case of rheumatic heart disease characterised by atypical clinical and laboratory features in a man positive for HIV.

A 28 year old African immigrant presented with